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19. (Twice Amended) An antenna for a transponder comprising a rectangular plate magnetic core comprising a single stack of rectangular metallic thin plates, each plate composed of a composite material of soft magnetic flakes and a synthetic resin, and a coil wound on said magnetic core perpendicular to a greater rectangular dimension of the magnetic core.

REMARKS

Claims 1-5, 8-12, 14-15, 17-29 and 31-36 are pending in the above-captioned patent application, of which claims 12 and 19 have been amended. No new claims have been added.

Claims 12, 14, 15, 17, and 18 stand rejected under 35 U.S.C. §112, second paragraph, as indefinite.

Accordingly, claim 12 has been amended to correct the noted instances of indefiniteness. Thus, the §112, second paragraph, rejection should be withdrawn.

Claims 1-5, 8-11, 19-29, and 36 stand rejected under 35 U.S.C. §103(a) as unpatentable over D'Hont in view of U.S. Patent 3,031,667 of Wennerberg (hereinafter "Wennerberg"), U.S. Patent 3,495,264 to Spears (hereinafter "Spears"), or U.S. Patent 3,750,180 to Fujimoto, et al. (hereinafter "Fujimoto, et al.").

Applicants respectfully traverse this rejection.

D'Hont discloses a flat, flexible antenna to be incorporated into a badge or similar object. Fig. 6 shows a coil 38 spirally wound on a strip of wires 36. Fig. 7 shows the wires being formed into several separate stacks of flat strips 42, 44, 46 and 48.

Wennerberg discloses a magnetic antenna apparatus having a solid ferrite core and a set of windings 11 parallel to the shorter rectangular dimension of the solid ferrite core and a set of windings 12 parallel to the longer rectangular dimension of the solid ferrite core.

Spears discloses a loop antenna coil 22 wrapped around the longer dimension of a closed rectangularly-shaped magnetic core loop.

Fujimoto, et al. discloses a magnetic antenna using a solid magnetic core with two square-shaped apertures 8,8'. A "pumping coil 12" is wound on the part of the core between apertures 8 and 8'.

As noted in Applicants' response of April 30, 1998, the several stacks of flat strips 42, 44, 46, and 48 in the magnetic core of D'Hont teaches away from the present invention in which there is only a single stack of rectangular thin plates, as recited in claim 1 of the present invention.

Furthermore, D'Hont fails to teach, mention or suggest any relationship of the orientation of the coil and the dimensions of the rectangular flat plates forming the core, as recited in claims 1 and 19.

None of the other cited references teaches, mentions, or suggests that the magnetic core consists of a single stack of flat plates, as recited in claim 1.

Accordingly, claim 19 has been amended to recite the distinction.

Thus, the §103(a) rejection should be withdrawn.

Claims 12, 14, 15, 17, and 18 stand rejected under 35 U.S.C. §103(a) as unpatentable over Stevens, et al. in view of Takizawa, et al. and D'Hont.

Applicants respectfully traverse this rejection.

As noted in Applicants' response of April 30, 1998, Stevens, et al. disclose a radio broadcast communication system with multiple loop antennas, specifically a loop air core antenna 46 having an axis perpendicular to ferrite core antenna 48.

Takizawa, et al. discloses a broadcasting wave reception antenna have a magnetic core having multiple radial projections extending on a common plane, and respective projections are provided with coils wound on them.

None of the references teaches, mentions or suggests, three antennas having mutually perpendicular axes, as recited in claims 12 and 32.

Despite the Examiner's arguments to the contrary, the combination of the cited references teaches only pairs of antennas having mutually perpendicular axes, and cannot be said to teach, mention, or suggest any arrangement of three (3) antennas having mutually perpendicular axes, as recited in claims 12 and 32.

Thus, the §103(a) rejection should be withdrawn

Claims 32-35 stand rejected under 35 U.S.C. §103(a) as unpatentable over D'Hont in view of Stevens, et al. and Takizawa, et al.

Applicants respectfully traverse this rejection.

As noted above, this combination of references fails to teach, mention, or suggest three (3) antennas having respective axes which are mutually perpendicular to one another, as recited in claim 32.

In view of the aforementioned amendments and accompanying remarks, claims 1-5, 8-12, 14-15, 17-29 and 31-36, as amended, are in condition for allowance, which action, at an early date, is respectfully requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event any fees are due in connection with this paper, the Commissioner is authorized to charge the same to our Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosure: Petition for Extension of Time